

No.

200000228



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Minnesota Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW. NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE SEED. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BARLEY

'Lacey'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this tenth day of June, in the year two thousand two.

Attest:



*P. L. M. J. ...*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

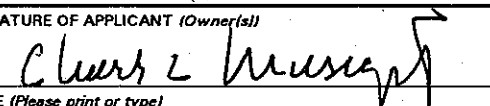
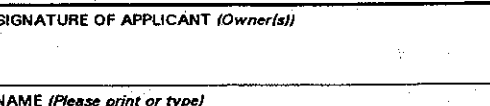
*... of Agriculture*

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

<b>1. NAME OF APPLICANT(S)</b> (as it is to appear on the Certificate)  Minnesota Agricultural Experiment Station		<b>2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER</b>  M98	<b>3. VARIETY NAME</b>  LACEY
<b>4. ADDRESS</b> (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  University of Minnesota, 190 Coffey Hall 1420 Eckles Ave., St. Paul, MN 55108		<b>5. TELEPHONE</b> (include area code)  612-625-4211	<div style="border: 1px solid black; padding: 2px; text-align: center;"> <b>FOR OFFICIAL USE ONLY</b>                  PVPO NUMBER  <span style="font-size: 1.2em;">200000228</span> </div>
<b>7. GENUS AND SPECIES NAME</b>  Hordeum vulgare L.		<b>8. FAMILY NAME</b> (Botanical)  Graminae	<b>6. FAX</b> (include area code)  612-624-7724
<b>9. CROP KIND NAME</b> (Common name)  Barley, six-rowed		<div style="border: 1px solid black; padding: 2px;"> <b>FILING</b>                  DATE                  8 MAY 2000             </div>	
<b>10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION</b> (corporation, partnership, association, etc.) (Common name)  State, Experiment Station		<div style="border: 1px solid black; padding: 2px;"> <b>FEES</b>                  FILING AND EXAMINATION FEE:                  \$ 2450.00                  DATE                  8 MAY 2000             </div>	
<b>11. IF INCORPORATED, GIVE STATE OF INCORPORATION</b>		<div style="border: 1px solid black; padding: 2px;"> <b>RECEIVED</b>                  CERTIFICATION FEE:                  \$ 300.00                  DATE                  4/12/02             </div>	
<b>13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS</b>  Donald C. Rasmusson Department of Agronomy and Plant Genetics, Univ. of Minnesota 411 Borlaug Hall, 1991 Buford Circle St. Paul, MN 55108		<b>14. TELEPHONE</b> (include area code)  612-625-7278	
<b>16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED</b> (Follow instructions on reverse) <ul style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety</li> <li>b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness</li> <li>c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety</li> <li>d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional)</li> <li>e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership</li> <li>f. <input checked="" type="checkbox"/> Voucher Sample (2,600 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository)</li> <li>g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)</li> </ul>		<b>15. FAX</b> (include area code)  612-625-1268	
<b>17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED?</b> (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "yes," answer items 18 and 19 below) <input type="checkbox"/> NO (If "no," go to item 20)			
<b>18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<b>19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?</b> <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
<b>20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?</b> <input checked="" type="checkbox"/> YES (If "yes," give names of countries and dates) <input type="checkbox"/> NO  U.S.A.      February 15, 2000			
<b>21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.</b>  The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.  Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
<b>SIGNATURE OF APPLICANT (Owner(s))</b>  		<b>SIGNATURE OF APPLICANT (Owner(s))</b>  	
<b>NAME</b> (Please print or type)  Charles C. Muscoplat		<b>NAME</b> (Please print or type)  Charles C. Muscoplat	
<b>CAPACITY OR TITLE</b> Director, Minnesota Agric. Experiment Station		<b>CAPACITY OR TITLE</b> Director, Minnesota Agric. Experiment Station	
<b>DATE</b> 5/2/00		<b>DATE</b> 5/2/00	

**BARLEY****"Lacey"****14A. Exhibit A. Origin and Breeding History of Lacey Barley**

"Lacey" spring barley (*Hordeum vulgare* L.) (Reg. No. cv \_\_\_\_\_, PI \_\_\_\_\_) was developed by the Minnesota Agricultural Experiment Station and released February 15, 2000. It was developed in a program designed to obtain a variety with a close match to industry malting quality guidelines. Its pedigree is M44 / 'Excel' / 2 / M46 / M44 / 3 / M44 / Excel / 2 / 'Stander'. M44 has the pedigree 'Nordic' / 'Manker' / 3 / 'Morex' / 2 / Manker / 63AB2987-32. M46 has the pedigree Nordic / Manker / 2 / 'Robust'. 63AB2987-32 is a breeding line developed in the USDA barley breeding program at Aberdeen, Idaho. The final cross leading to Lacey was made in 1993. The breeding method was pedigree coupled with single-seed descent. Lacey originated from a single plant taken at random from a selected F<sub>5</sub> line. There was no selection in the F<sub>2</sub> through F<sub>4</sub> generations with the F<sub>3</sub> and F<sub>4</sub> generations being advanced in the greenhouse. Visual selection in the F<sub>5</sub> generation involved maturity, height, lodging and leaf disease reaction. Replicated agronomic and disease testing began in Minnesota in 1996 and regional testing in 1998. Micro-malting evaluations began in 1996, industry pilot quality evaluation in 1997 and industry plant scale quality evaluation in 1999. Selection was done among head rows in 1997; 60 head rows were bulked to reconstitute the line. Lacey has been uniform and stable for three generations. It contains no off-type plants or variants.

Seed stocks will be maintained by the Minnesota Agricultural Experiment Station and the Minnesota Crop Improvement Association. Certification will be limited to three generations after breeders seed: Foundation, Registered and Certified. Certified seed will be offered for sale in 2000. Application has been made for protection (PVP with the "certification option").

## 14B. Exhibit B. Novelty Statement

"Lacey" barley (*Hordeum vulgare* L.) (Reg. No. \_\_\_\_\_, PI \_\_\_\_\_) is a six-row smooth-awn, spring-type. Its covered kernels have short hairs on the rachilla and a white aleurone. The spike is medium-lax, medium long and semi-erect. Compared to Robust, it has improved lodging resistance and similar maturity. It is resistant to the common races of stem rust and spot blotch in Minnesota. It is susceptible to loose smut and Fusarium head blight.

Lacey is most similar to Robust, a widely grown cultivar in the Midwest. It can be distinguished from Robust because it is shorter by several centimeters.

Distinguishing 'Lacey' from 'Robust' for the traits plant height and grain protein. We dropped yield as was requested in the letter from you.

The data presented below are from three locations in Minnesota in the summer of 2001. At each location the analysis included three adjacent yield trials with each trial containing three replicates (arrange in a randomized complete block) for a total of nine experimental units for each variety in each trial. The data were analyzed by analysis of variance using the SAS software PROC ANOVA. The replicates were nested inside the three trials at each location. The plot size for all of the trials was 56 inches by 14 feet. The planting dates for the St. Paul, Morris and Crookston locations were April 26, May 3, and May 14, respectively. Plant height was measured as the distance from the soil surface to the tip of the awns in one location in the center of the plot when plants had finished elongation and were beginning to mature.. Grain protein was measured on harvested and cleaned grain samples on a FOSS 6500 NIRS system. Each sample was scanned twice and the mean of the two scans was used in the analysis of variance. The differences among varieties were significantly different ( $\alpha = 0.05$ ) for both traits at all three locations. Trait means, Fisher's least significant difference (LSD), and the CV. was calculated for each individual trial for plant height (Table 1) and grain protein (Table 2).

Table 1. Plant height (cm) for Lacey and Robust at three locations in Minnesota in 2001.

Variety	Crookston	Morris	St. Paul
Robust	90	81	105
Lacey	85	73	98
LSD <sub>0.05</sub>	4	3	2
C.V.	4.2	2.5	1.9

Table 2. Percent grain protein for Lacey and Robust at three locations in Minnesota in 2001.

Variety	Crookston	Morris	St. Paul
Robust	13.0	14.0	12.5
Lacey	12.3	13.2	11.9
LSD <sub>0.05</sub>	0.7	0.2	0.4

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
COMMODITIES SCIENTIFIC SUPPORT DIVISION  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Barley)

OBJECTIVE DESCRIPTION OF VARIETY  
BARLEY (HORDEUM VULGARE)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Minnesota Agricultural Experiment Station

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

190 Coffey Hall, 1420 Eckles Ave.

University of Minnesota, St. Paul, MN 55108

FOR OFFICIAL USE ONLY

PVPO NUMBER

200000228

VARIETY NAME OR TEMPORARY DESIGNATION

LACEY

Place the appropriate number that describes the varietal character of this variety in the boxes below.  
Place a zero in first box (i.e.    or   ) when number is either 99 or less or 9 or less.

## 1. GROWTH HABIT:

1 - SPRING 2 - FACULTATIVE WINTER 3 - WINTER    Early Growth: 1 - PROSTRATE 2 - SEMIPROSTRATE  
3 - ERECT

## 2. MATURITY (50% Flowering):

1 - EARLY (California Mariout) 2 - MIDSEASON (Robust Bates) 3 - LATE (Frontier)

No. of days Earlier than .....    } 1=Robust  
1 - BETZES 2 - CALIFORNIA MARIOUT 3 - CONQUEST 4 - DICKSON

No. of days Later than .....    } 5 - PIROLINE 6 - PRIMUS 7 - UNITAN

## 3. PLANT HEIGHT (From soil level to top of head):

1 - SEMIDWARF 2 - SHORT (California Mariout) 3 - MEDIUM TALL (Robust Bates) 4 - TALL (Conquest)

Cm. Shorter than .....    } 1=Robust  
1 - BETZES 2 - CALIFORNIA MARIOUT 3 - CONQUEST 4 - DICKSON

Cm. Taller than .....    } 5 - PIROLINE 6 - PRIMUS 7 - UNITAN

## 4. STEM:

Exertion (Flag to spike at maturity): 1 - 0 - 3 cm. 2 - 3 - 10 cm.    Anthocyanin: 1 - ABSENT 2 - PRESENT  
3 - 10 - 15 cm.

NO. OF NODES (Originating from node above ground)

Collar Shape: 1 - CLOSED 2 - V-SHAPED 3 - OPEN    Shape of Neck: 1 - STRAIGHT 2 - SNAKY  
4 - MODIFIED CLOSED OR OPEN 3 - OTHER (Specify) .

## 5. LEAF:

Basal leaf sheath (seedling): 1 - GLABROUS 2 - PUBESCENT    Position of flag leaf (at boot stage): 1 - DROOPING  
2 - UPRIGHT

Waxiness: 1 - ABSENT (Glossy) 2 - SLIGHTLY WAXY    MM. WIDTH (First leaf below flag leaf)  
3 - WAXY

CM. LENGTH (First leaf below flag leaf)    Anthocyanin in leaf sheath: 1 - ABSENT 2 - PRESENT

## 6. HEAD:

Type: 1 - TWO-ROWED 2 - SIX-ROWED    Density: 1 - LAX 2 - ERECT (Not dense)  
3 - ERECT (Dense)

Shape: 1 - TAPERING 2 - STRAP 3 - CLAVATE    Waxiness: 1 - ABSENT (Glossy) 2 - SLIGHTLY WAXY  
4 - OTHER (Specify) 3 - WAXY

Lateral Kernel Overlap: 1 - NONE 2 - AT TIP    Rachis (Hair on edge): 1 - LACKING 2 - FEW 3 - COVERED  
3 - 1/4 - 1/2 OF HEAD

## 7. GLUME:

Length: 1 - 1/3 OF LEMMA 2 - 1/2 OF LEMMA    Hairs: 1 - NONE 2 - SHORT 3 - LONG  
3 - MORE THAN 1/2 OF LEMMA

Hair covering: 1 - NONE 2 - RESTRICTED TO MIDDLE 3 - CONFINED TO BAND 4 - COMPLETELY COVERED

Awns: 1 - LESS THAN EQUAL TO LENGTH OF GLUMES 2 - EQUAL TO LENGTH OF GLUMES  
3 - MORE THAN EQUAL TO LENGTH OF GLUMES

Awn Surface: 1 - SMOOTH 2 - SEMISMOOTH 3 - ROUGH

## 8. LEMMA:

- ☐ 5 Awn: 1 - AWNLESS 2 - AWNLETS ON CENTRAL ROWS AWNLESS ON LATERAL ROWS  
 3 - SHORT ON CENTRAL ROWS, AWNLETS ON LATERAL ROWS 4 - SHORT (less than equal to length of spike)  
 5 - LONG (longer than spike) 6 - HOODED
- ☐ 2 Awn Surface: 1 - AWNLESS 2 - SMOOTH 3 - SEMISMOOTH 4 - ROUGH
- ☐ 2 Teeth: 1 - ABSENT 2 - FEW 3 - NUMEROUS ☐ 1 Hair: 1 - ABSENT 2 - PRESENT
- ☐ 3 Shape of base: 1 - DEPRESSION 2 - SLIGHT CREASE ☐ 1 Rachilla Hairs: 1 - SHORT 2 - LONG  
 3 - TRANSVERSE CREASE

## 9. STIGMA:

- ☐ 2 Hairs: 1 - FEW 2 - MANY

## 10. SEED:

- ☐ 2 Type: 1 - NAKED 2 - COVERED ☐ Hairs on Ventral Furrow: 1 - ABSENT 2 - PRESENT
- ☐ 3 Length: 1 - SHORT (8.0 mm.) 2 - SHORT TO MIDLONG (7.5 - 9.0 mm.) 3 - MIDLONG (8.5 - 9.5 mm.)  
 4 - MIDLONG TO LONG (9.0 - 10.5 mm.) 5 - LONG (10.0 mm.)
- ☐ 2 Wrinkling of hull: 1 - NAKED 2 - SLIGHTLY WRINKLED 3 - SEMIWRINKLED 4 - WRINKLED
- ☐ 1 Aleurone Color: 1 - COLORLESS (White or Yellow) 2 - BLUE
- ☐ 0 ☐ 0 PERCENT ABORTIVE ☐ 3 ☐ 4 GMS. PER 1000 SEEDS

## 11. DISEASE: (0 - Not Tested, 1 - Susceptible, 2 - Resistant)

- ☐ 0 SEPTORIA ☐ 1 NET BLOTCH ☐ 2 SPOT BLOTCH ☐ 1 POWDERY MILDEW
- ☐ 1 LOOSE SMUT ☐ 0 BACTERIAL BLIGHT ☐ 0 COVERED SMUT ☐ 0 FALSE LOOSE SMUT
- ☐ 2 STEM RUST ☐ 0 LEAF RUST ☐ 1 SCAB ☐ 0 SCALD
- ☐ 0 AY ☐ 0 BSMV ☐ 0 BYDV ☐ OTHER (Specify)

## 12. INSECT: (0 - Not tested, 1 - Susceptible, 2 - Resistant)

- ☐ 0 GREEN BUG ☐ 0 ENGLISH GRAIN APHID ☐ 0 CHINCH BUG ☐ 0 ARMYWORM
- ☐ 0 GRASS HOPPERS ☐ 0 CEREAL LEAF BEETLE ☐ 0 OTHER (Specify)
- HESSIAN FLY RACES ☐ 0 GP ☐ 0 A ☐ 0 B ☐ 0 C  
☐ 0 D ☐ 0 E ☐ 0 F ☐ 0 G

## 13. CHEMICAL (0 - Not Tested, 1 - Susceptible, 2 - Resistant)

- ☐ 0 DDT ☐ OTHER (Specify)

## 14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Robust	Seed size	Robust
Leaf size	Robust	Coleoptile elongation	Robust
Leaf color	Robust	Seedling pigmentation	Robust
Leaf carriage	Stander		

REFERENCES: The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

1. Wiebe, G. A., and D. A. Reid, 1961, Classification of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.
2. Reid, D. A., and G. A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests, Agriculture Handbook No. 338, U.S. Dept. of Agriculture, pp. 61 - 84.
3. Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.

#### 14D. Exhibit D. Additional Description of Lacey

Lacey has several favorable traits that are the basis for release to growers. Perhaps the most important is its quality profile which is a good match to malting and brewing industry guidelines. It has favorable levels of kernel plumpness, grain protein, malt extract, diastatic power and alpha amylase. In comparison to other newly released six-row cultivars in the region it has low wort protein and a low ratio of wort protein to malt protein. These latter traits are especially important to industry at this time.

In field performance trials in Minnesota for the years 1998 and 1999, grain yield of Lacey was 117% of Robust (Table 2). In regional trials, also for 1998 and 1999, grain yield of Lacey was 112% of Robust (Table 2). Lodging resistance is improved compared to Robust. Percentage plump kernels of Lacey is high and similar to Robust.

Lacey possesses the ND B112 source of resistance to spot blotch [*Bipolaris sorokiniana* (Sacc.) Shoemaker], and some tolerance to net blotch [*Pyrenophora teres* Drechs.]. It has the RpgL (T) gene for resistance to stem rust [*Puccinia graminis* (Pers.:Pers.) ver. *tritici*] which conditions resistance to current races of stem rust except race QCC. It is susceptible to loose smut [*Ustilago tritici*] (Pers.) Rostr.] and Fusarium head blight [*Fusarium graminearum*].

Table 1. Height (cm) of Lacey and Robust in 18 trials in 1998-99.

	<u>Regional Nursery</u>		<u>Minnesota</u>
	<u>1998</u>	<u>1999</u>	<u>1999</u>
No. locations	5	7	6
Robust	97.4	86.4	89
Lacey	87.8	80.1	81
LSD (5%)	4.4	2.8	4.5

Table 2. Grain Yield (kg/ha) of Lacey and Robust.

	<u>Regional Nursery</u>		<u>Minnesota</u>	
	<u>1998</u>	<u>1999</u>	<u>1998</u>	<u>1999</u>
No. locations	7	7	3	6
Robust	3984	3846	4686	4624
Lacey	4431	4369	6074	5111
LSD (5%)	352	469	635	327



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

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Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

# EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S)  Minnesota Agricultural Experiment Station	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER  M98	3. VARIETY NAME  LACEY
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Univ. of Minnesota, 190 Coffey Hall 1420 Eckles Ave., St. Paul, MN 55108	5. TELEPHONE (include area code) 612-625-4211	6. FAX (include area code) 612-624-7724
7. PVPO NUMBER 200000228		

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? ☐ YES ☒ NO  
If no, give name of country

10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer the following:

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

☒ YES ☐ NO If no, give name of country

b. If original rights to variety were owned by a company, is the original owner(s) a U.S. based company?

☒ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (If needed, use reverse for extra space):

## PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

- If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.